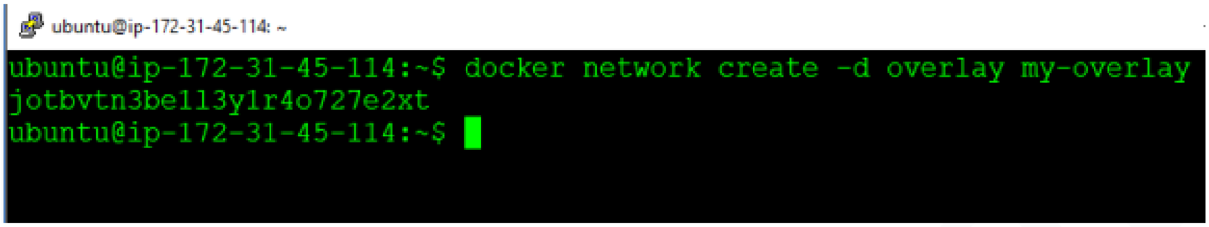
Hands-On: Deploy a Multi-Tier App

Step 1: Create a Docker network of type overlay

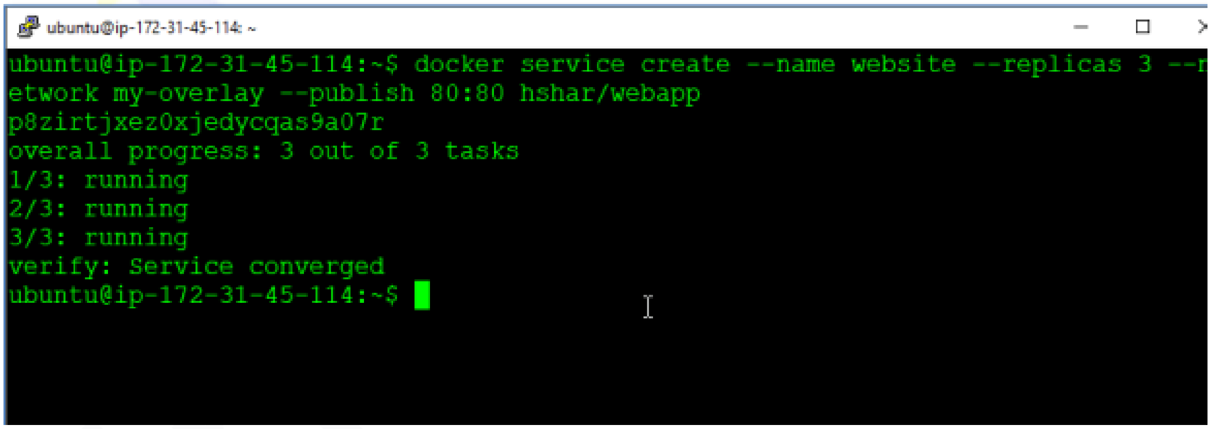
```
$ docker network create –d overlay my-overlay
```



```
ubuntu@ip-172-31-45-114:~$ docker network create -d overlay my-overlay
jotbvtn3be113y1r4o727e2xt
ubuntu@ip-172-31-45-114:~$
```

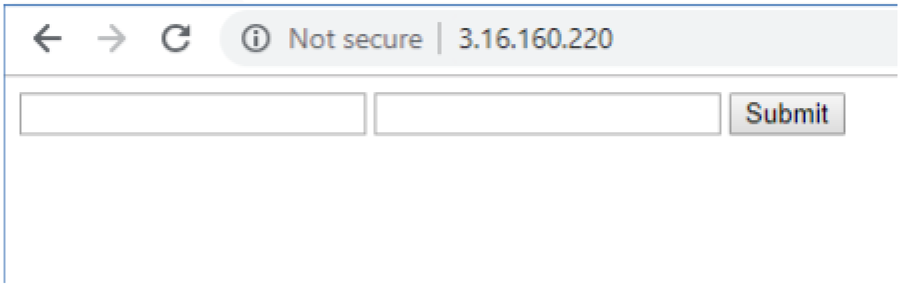
Step 2: Now let’s create the web app service

```
$ docker service create --name website --replicas 3 –network my-overlay --publish 80:80
hshar/webapp
```



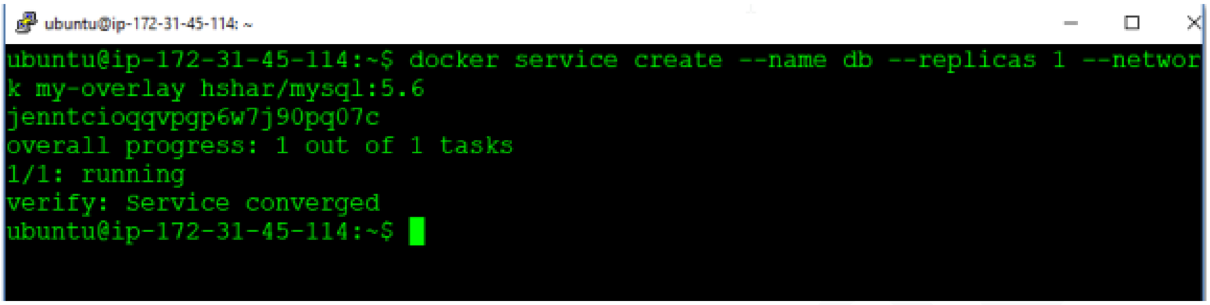
```
ubuntu@ip-172-31-45-114:~$ docker service create --name website --replicas 3 --r
etwork my-overlay --publish 80:80 hshar/webapp
p8zirtjxez0xjedycqas9a07r
overall progress: 3 out of 3 tasks
1/3: running
2/3: running
3/3: running
verify: Service converged
ubuntu@ip-172-31-45-114:~$
```

Step 3: Let us try running the website in our browser



Step 4: Now let us deploy the DB service

```
$ docker service create --name db --replicas 1 --network my-overlay hshar/mysql:5.6
```

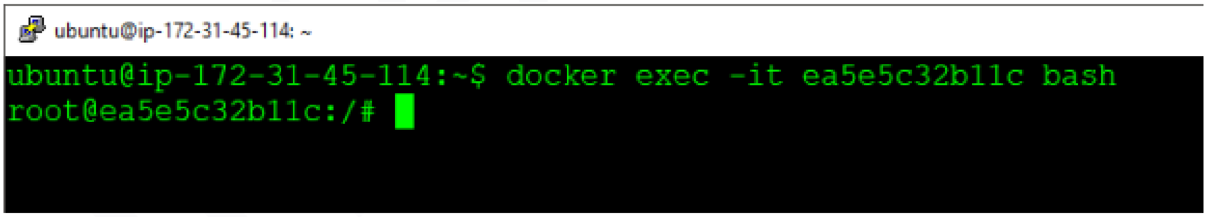


ubuntu@ip-172-31-45-114: ~

```
ubuntu@ip-172-31-45-114:~$ docker service create --name db --replicas 1 --networ
k my-overlay hshar/mysql:5.6
jenntcioqqvpgp6w7j90pq07c
overall progress: 1 out of 1 tasks
1/1: running
verify: Service converged
ubuntu@ip-172-31-45-114:~$
```

Step 5: Let us exec into the db container now, you will have to check on which node the MySQL container is present, accordingly do an exec on that container

```
$ docker exec –it <container-id> bash
```

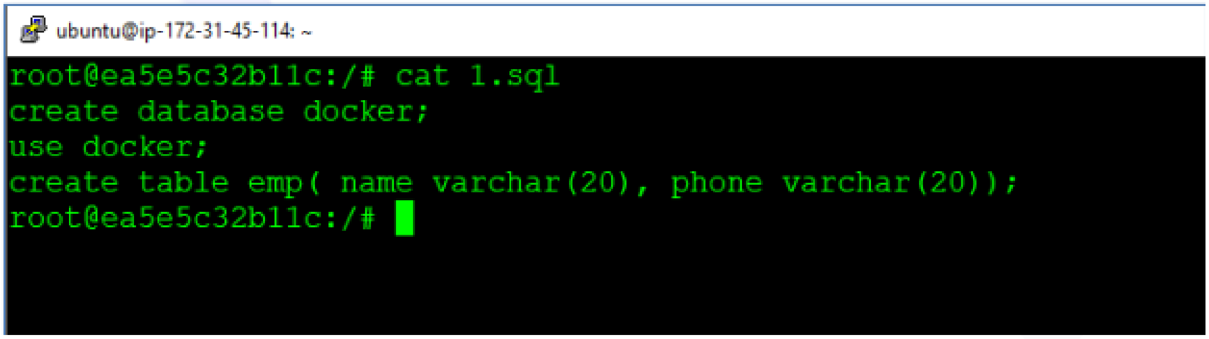


ubuntu@ip-172-31-45-114: ~

```
ubuntu@ip-172-31-45-114:~$ docker exec -it ea5e5c32b11c bash
root@ea5e5c32b11c:/#
```

Step 6: Finally create a 1.sql file in this container with the following contents:

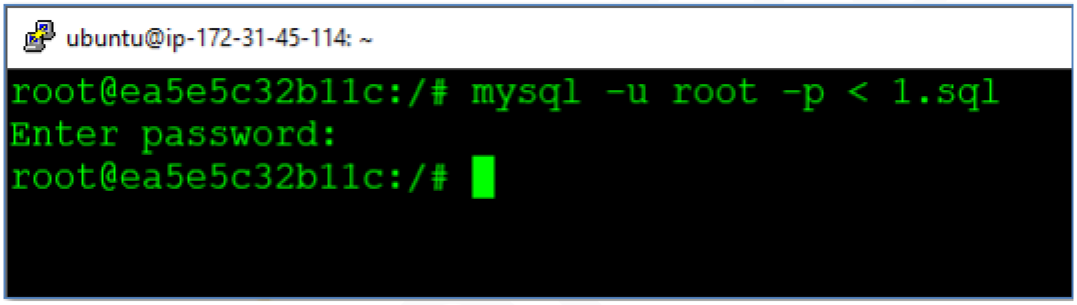
```
Create database docker;

Use docker;

Create table emp(name varchar(20), phone varchar(20));
```



```
root@ea5e5c32b11c:/# cat 1.sql
create database docker;
use docker;
create table emp( name varchar(20), phone varchar(20));
root@ea5e5c32b11c:/#
```

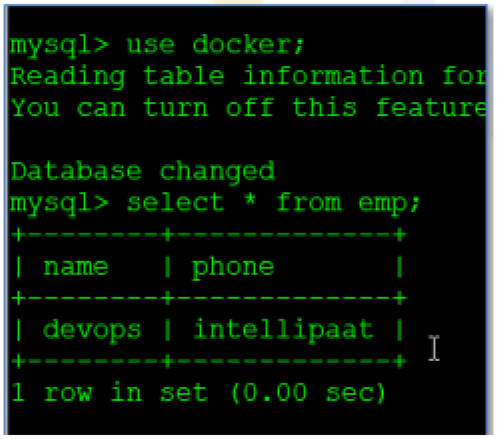
Step 7: Pass the following command and this shall build your database and table. The password for MySQL is “intelli” and the username is “root”.

```
mysql –u root –p < 1.sql
```

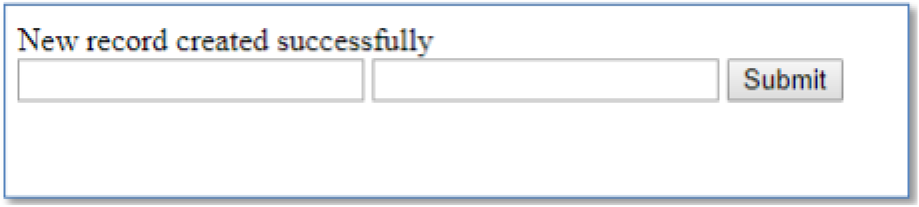


```
root@ea5e5c32b11c:/# mysql -u root -p < 1.sql
Enter password:
root@ea5e5c32b11c:/#
```

Step 8: Finally check the website by entering data, and verifying whether your MySQL table is being populated



```
mysql> use docker;
Reading table information for
You can turn off this feature

Database changed
mysql> select * from emp;
+--------+-------------+
| name   | phone       |
+--------+-------------+
| devops | intellipaat |
+--------+-------------+
1 row in set (0.00 sec)
```



New record created successfully